

### **REMARKS**

Applicants have amended claims 37 and 38 to more appropriately define the present invention and have added new claim 39 to protect additional aspects related to the present invention. Claims 30-39 remain pending and under current examination.

#### **Regarding the Office Action:**

In the Office Action, the Examiner rejected claim 38 under 35 U.S.C. § 112, second paragraph, as being indefinite; rejected claim 37 under 35 U.S.C. § 102(a) “as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Applicant’s Prior Art (Fig. 1)” (“APA”) (Office Action, p. 2); and allowed claims 30-36. Applicants acknowledge with appreciation the Examiner’s indication that claims 30-36 are allowed. Nevertheless, Applicants traverse the rejections for the following reasons.<sup>1</sup>

#### **Regarding the Amendments to Claims 37 and 38, and New Claim 39:**

Applicants have amended claims 37 and 38 to more appropriately define the claimed invention, and added new claim 39 to protect additional aspects of the claimed invention. Support for the amendments may be found in the originally filed claim language, and in the specification at, for example, pages 6 and 7, and FIG. 22K.

#### **Rejection of Claim 38 under 35 U.S.C. § 112, 2nd paragraph:**

Applicants contest the Examiner’s allegation, regarding claim 38, that “[i]t is unclear what the remaining region of the pair of thin films is whether it is the same region under the sidewall and substrate or something separate” (Office Action, p. 2).

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<sup>1</sup> The Office Action contains statements characterizing the related art and the claims. Regardless of whether any such statements are specifically identified herein, Applicants decline to automatically subscribe to any statements in the Office Action.

Applicants point out that claim 38 more than adequately “meets the threshold requirements of clarity and precision” (M.P.E.P. § 2173.02), as is clear from the claim language read in light of Fig. 22K, for example, and the description on page 69, line 17 to page 70, line 12, of the specification.

In the semiconductor device shown in Fig. 22K, a region of the pair of thin films (204) and upper portion of (208) between the gate sidewall (207) and the substrate (201) contain a conductive impurity. Furthermore, a surface region (lower portion of (208)) in the substrate (201) in contact with an upper portion of (208) on which said gate sidewall is absent also contains a conductive impurity. It is thus evident that every feature of claim 38 is illustrated in Fig. 22K, and the claim clearly sets out and circumscribes a particular subject matter with a reasonable degree of clarity and particularity. *See* M.P.E.P. § 2173.02. Applicants already pointed this out to the Examiner in the Request for Reconsideration after Final filed on January 28, 2004.

Applicants respectfully remind the Examiner that “[s]ome latitude in the manner of expression and the aptness of terms should be permitted even though the claim language is not as precise as the examiner might desire.” M.P.E.P. § 2173.02. Furthermore, “[d]efiniteness of claim language must be analyzed, not in a vacuum, but in light of: (A) [t]he content of the particular application disclosure; (B) [t]he teachings of the prior art; and (C) [t]he claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.” *Id.* Applicants point out that the above-mentioned discussion demonstrates that claim 38 meets the threshold requirements of clarity and precision.

Applicants further direct the Examiner to the exemplary citations to Applicants’ specification, claims and drawings, made above, demonstrating claim 38 complies with 35

U.S.C. § 112, second paragraph. Applicants “can define in the claims what they regard as their invention essentially in whatever terms they choose so long as the terms are not used in ways that are contrary to accepted meanings in the art. [They] may use ... any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought.” M.P.E.P. § 2173.01.

Claim 38 is allowable, and the improper 35 U.S.C. § 112, second paragraph, rejection of claim 38 should be withdrawn.

**Rejection of Claim 37 under 35 U.S.C. § 102(a) / 35 U.S.C. § 103(a):**

APA is the only reference relied upon by the Examiner in this rejection. First, Applicants hereby challenge the Examiner’s combined 35 U.S.C. § 102(a) / 35 U.S.C. § 103(a) rejection as improper and without merit, even before addressing the deficiencies of APA below. Applicants direct the Examiner to M.P.E.P. § 706.02, which states:

The distinction between rejections based on 35 U.S.C. 102 and those based on 35 U.S.C. 103 should be kept in mind. Under the former, the claim is anticipated by the reference. No question of obviousness is present. In other words, for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. Whereas, in a rejection based on 35 U.S.C. 103, the reference teachings must somehow be modified in order to meet the claims.

The M.P.E.P. clearly instructs that, for a proper 35 U.S.C. § 102 rejection, “[n]o question of obviousness is present.” Id. Therefore, if the Examiner applies a 35 U.S.C. § 102(a) rejection based on APA, this must necessarily preclude a 35 U.S.C. § 103(a) rejection of the same claim, based on the same reference, for the same reason. Similarly, the M.P.E.P. clearly instructs that,

for a proper 35 U.S.C. § 103 rejection, “the reference teachings must somehow be modified in order to meet the claims.” Id. Therefore, if the Examiner applies a 35 U.S.C. § 103(a) rejection based on APA, this must necessarily preclude a 35 U.S.C. § 102(a) rejection of the same claim, based on the same reference, for the same reason.

Thus, if the Examiner alleged that the applied reference meets all the claim limitations in a 35 U.S.C. § 102(a) rejection, then she cannot also apply a 35 U.S.C. § 103(a) rejection “in the alternative” (Office Action, p. 2), for this necessarily admits the impropriety of the 35 U.S.C. § 102(a) rejection. Likewise, if the Examiner alleges that Applicants’ claim 37 is obvious in a 35 U.S.C. § 103(a) rejection, then she cannot also apply a 35 U.S.C. § 102(a) rejection in combination, for this necessarily admits the impropriety of the 35 U.S.C. § 103(a) rejection, since the 35 U.S.C. § 103(a) rejection necessarily stipulates that “the reference teachings must somehow be modified in order to meet the claims.” Id.

Second, “[i]t is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply.” M.P.E.P. § 706.02(j), p. 700-31. The Examiner’s rejections are not properly communicated, as there is no explanation of how APA has to be modified to meet the elements of claim 37. For example, even assuming the Examiner only applied a 35 U.S.C. § 103(a) rejection, the M.P.E.P. instructs that,

“[a]fter indicating that the rejection is under 35 U.S.C. 103, the examiner should set forth in the Office action:

(A) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate,

(B) the difference or differences in the claim over the applied reference(s),

(C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and

(D) an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification.” Id.

For the purposes of a 35 U.S.C. § 103(a) rejection, Applicants submit that the Examiner has not set forth “the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate,” “the difference or differences in the claim over the applied reference(s),” “the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter,” or “an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification.” Id.

Therefore, the Examiner’s 35 U.S.C. § 102(a) / 35 U.S.C. § 103(a) rejection is wholly improper on its face, without even addressing the deficiencies in the cited references. If the Examiner’s 35 U.S.C. § 102(a) rejection is to be considered valid, the 35 U.S.C. § 103(a) rejection is necessarily improper; and if the 35 U.S.C. § 103(a) rejection is valid, the 35 U.S.C. § 102(a) is necessarily improper.

Third, the Examiner alleged claim 37 is a product-by-process claim, and that “Applicant has the burden of proof in such cases...” (Office Action, p. 3), without specifying exactly what Applicants have the burden of proving. Applicants respectfully submit that the Examiner cited outdated caselaw in support of her generalized allegations, and misapplied caselaw on product-by-process claims.

Contrary to the Examiner’s allegation that claim 37 is a product-by-process claim, Applicants’ claim 37 recites elements of a *semiconductor device*, specifically a special type of

the claimed “pair of thin films,” without departing from the fact that claim 37 specifically recites “A semiconductor device,” that is, a *product*. Therefore, the Examiner’s allegations are: (1) without merit and (2) an incorrect statement of the law. It is clear that Applicants’ claim 37 is still directed to an “A semiconductor device” (e.g., a “product”), and not to the means by which the claimed “pair of thin films” is formed.

Nevertheless, to advance prosecution, Applicants have amended claim 37, without narrowing the claim, to recite “a pair of thin films formed by epitaxial growing a semiconductor on one major surface of said substrate” (amendments shown), thereby eliminating any concern that Applicants’ claim language is construed as a product-by-process claim.

Therefore, APA does not disclose each and every element of Applicants’ claimed invention, despite the Examiner’s allegations. In particular, APA fails to disclose at least the claimed combination, including, for example, “a pair of thin films formed on one major surface of said substrate” (claim 37). APA is silent as to at least this element of claim 37, and is also silent as to the additional element included in amended claim 37. In contrast to the claimed invention, therefore, APA does not does not disclose at least these elements of claim 37.

Thus, the Examiner has met neither of the essential requirements of anticipation for a proper 35 U.S.C. § 102(a) rejection, nor the essential requirements of a proper 35 U.S.C. § 103(a) rejection, also set forth above. Independent claim 37 is allowable, and the improper 35 U.S.C. § 102(a) / 35 U.S.C. § 103(a) rejection should be withdrawn.

**Conclusion:**

In view of the foregoing, Applicants request reconsideration of the application and withdrawal of the rejections. Pending claims 30-39 are in condition for allowance, and Applicants request a favorable action.

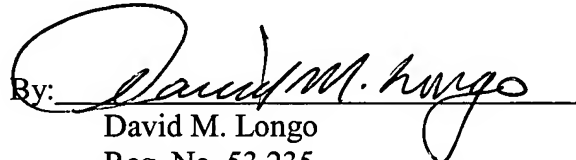
Should the Examiner continue to dispute the patentability of the claims after consideration of this Amendment, Applicants encourage the Examiner to contact the undersigned representative by telephone to discuss any remaining issues or to resolve any misunderstandings.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: October 20, 2004

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